Advisory Panel on Contaminated Sites

Interim Report

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Table of Contents

1.	INTRODUCTION		4
2.	UNDERLYING GOALS OF THE RECOMMENDED SYSTEM		6
3.	KEY CHANGES		6
4.	SUMMARY OF RECOMMENDATIONS		8
	4.1	What Is a "Contaminated Site"?	8
	4.2	What Is the Recommended System?	9
	4.3	How Should Standards Be Developed and Used?	12
	4.4	How Can We Ensure that Remediation Is Managed More Responsibly?	14
	4.5	Who Will Be Responsible for Remediating Contaminated Sites?	15
	4.6	How Will Liability Be Determined and Apportioned?	17
	4.7	How Will Disputes Be Resolved?	18
	4.8	What Mechanisms Provide Closure with respect to Liability?	19
	4.9	What Should the Role of the Regulatory Agency Be?	21
	4.10	How Do We Encourage Redevelopment of Brownfield Sites?	23
	4.11	What Funding Mechanisms Can Sustain Government's Role in Contaminated Sites?	24
	4.12	What Role Will Municipalities Have Under the New System?	26
	4.13	What Initiatives Can Help Resolve Existing and Prevent Future Contamination?	27
5.	WHAT CHANGES SHOULD BE IMPLEMENTED IMMEDIATELY?		28
	5.1	Greater Acceptance of Risk Management	28
	5.2	Greater Acceptance of Site Specific Standards and Risk Assessment	29
	5.3	Applicable Standard	29
	5.4	Acceptance of Professional Judgment	29
	5.5	Roster System	29
	5.6	Distinction Between Legal Requirements and Policy	31
	5.7	Ministry Resources	32

5.8	Industry Initiatives	32
5.9	Brownfield Sites	32
5.10	Federal Liaison	32
5.11	Greater Recognition of Cost Benefit Analysis	33

1. INTRODUCTION

The Advisory Panel on Contaminated Sites was appointed to review Part 4 of the *Waste Management Act* ("Act") and the *Contaminated Sites Regulation* ("CSR"). In particular, the Panel was asked to review several key components of the contaminated sites regime and to make "actionable" recommendations to inform a new policy framework for regulating contaminated sites in British Columbia. A primary consideration for the Panel was the Government's commitment to creating an efficient, effective, performance-based regime that will focus public resources on sites that pose a high risk to human health and environment.

Areas reviewed by the Panel included issues associated with liability principles, funding mechanisms, government administration, standards and best practices in other jurisdictions.

As set out in the Terms of Reference, the review was triggered by stakeholder concerns that

- The current contaminated site system is
    - unnecessarily cumbersome, expensive and bureaucratic;
    - overly prescriptive and stringent in application; and
    - plagued by lengthy approval processes that must be completed before clean up and redevelopment of property can occur.

- Resources are being spent unnecessarily on lengthy administrative and legal proceedings and on consultant costs, rather than on remediating contaminated sites.

- The principles of absolute, retroactive, joint and several liability in the legislation lack fairness and have resulted in investors being fearful of investing in or redeveloping contaminated land in British Columbia, leading to the creation of numerous unproductive "Brownfield" sites.

As part of its consultation process, the Panel reviewed over 60 submissions from stakeholders and interested citizens. It also met or held conference calls with over 30 stakeholder groups, including regulators in other jurisdictions.

The concerns described above were reiterated throughout the consultation process. Overall, the contaminated site system is dominated by fear of liability, rather than by the need to protect health, safety and the environment. British Columbia's contaminated site regime is based on the American *Comprehensive Environmental Response, Compensation, and Liability Act* ("CERCLA") model for dealing with contaminated sites. Interestingly, the American jurisdictions we examined all faced similar problems with their CERCLA based regimes to those experienced in British Columbia. All had implemented or were considering reforms to make their systems more timely and responsive to economic activity; ensure the best use of public and private resources to manage actual risk and achieve environmental and human health benefits proportionate with socio-economic costs; and create incentives to encourage Brownfield redevelopment.

We are proposing that a new system for managing contaminated sites be adopted in British Columbia. This Interim Report provides a summary of the Panel's recommendations. Section 2 presents the underlying goals of the proposed contaminated sites system. Section 3 lists the key changes recommended. Section 4 provides a brief overview of the Panel's recommendations in a question and answer format. Section 5 discusses changes that should be considered for immediate implementation.

Subsequently, the Panel will provide a Final Report that discusses our recommendations in more detail and documents the results of the consultation process. We anticipate that our recommendations may be further refined following additional consultation with stakeholders and interested citizens.

2. UNDERLYING GOALS OF THE RECOMMENDED SYSTEM

- Protect health, safety and the environment from significant actual or probable harm caused by contaminants.

- Promote a healthy and sustainable economy and communities through the best use of limited public and private resources.

- Establish a timely, sensible and scientifically based regulatory system.

- Ensure regulatory tools are proportionate with risk and based on a fair, legally defensible set of principles.

- Implement a clear, fair and accountable process that focuses Government resources on planning, monitoring and enforcement, and private resources on achieving remediation goals.

3. KEY CHANGES

In order to achieve the underlying goals, the Panel recommends the following fundamental changes:

(i) Redefine what is considered to be a "contaminated site".

(ii) Require remediation only where there is a significant actual or potential risk to health, safety or the environment.

(iii) Simplify the regulatory process to

- Modify the process to make it less prescriptive and more performance- based;
- Allow common sense and professional judgment to be used in deciding how sites should be managed;
- Create a distinct management and regulatory program – the BC Land Protection Program;
- Focus Government involvement on high risk sites; and
- Establish a system of Licensed Environmental Professionals to oversee non-high risk sites.

(iv) Change the system from one driven by fear of liability to one that protects health, safety and the environment from actual or probable harm.

(v) Modify the liability scheme so that the regulatory tools are fair and proportionate to the health, safety and environmental risks posed by a site.

(vi) Provide clarity, certainty and closure with respect to liability, and implement an early allocation mechanism.

(vii) Promote a co-operative and responsive culture within the regulatory agency.

(viii) Encourage redevelopment of Brownfield properties.

(ix) Establish a dedicated, self-sustaining fund that will

- Provide incentives for Brownfield redevelopment;
- Pay for orphan sites/shares;
- Fund regulatory services; and
- Develop science-based solutions.

(x) Allow for industry-specific solutions for

- Petroleum storage tanks / service stations;
- Dry cleaners;
- Wood preservers; and
- Mines.

(xi) Expand use of pollution prevention ("P2") planning to prevent future contamination.

(xii) Encourage municipal, provincial and federal governments to reach an understanding regarding a common approach for managing contaminated sites in the Province.

4. SUMMARY OF RECOMMENDATIONS

4.1 What Is a "Contaminated Site"?

We need to redefine what we consider to be a "contaminated site." The current definition is based primarily on whether substances exceed numerical standards set out in the CSR. This approach is overly simplistic and leads to sites being characterized as contaminated even when natural background levels exceed the standards. The approach also fails to take into account whether these substances pose an actual risk at a particular site. Many jurisdictions in North America determine that a site is

contaminated where it poses an actual or imminent risk to or effect on health, safety or the environment.

We therefore recommend that the current definition of a "contaminated site", as set out in section 26 of the Act and section 11(1) of the CSR, should be replaced with a definition that incorporates an assessment of risk, exposure pathways and receptors at a particular site. "Contaminated site" should be defined as

> *an area of the environment where a substance is present and is causing, has caused or may cause a significant and verifiable adverse effect on or risk to human health, safety or the environment.*

4.2 What Is the Recommended System?

Stakeholders overwhelmingly expressed frustration with the current process. It is unnecessarily cumbersome and prescriptive, and plagued with lengthy delays that impede economic activity even on sites that have no verifiable actual or imminent risk.

We recommend that significant and substantive changes be made to provide for a timely, responsive and accountable process. The process we propose is described in Figures 1 and 2. It distinguishes between three risk categories: "high risk", "limited risk", and "no risk".

To enable the regulatory agency to focus its resources on high risk sites, we recommend establishing a stand-alone and independent system of Licensed Environmental Professionals (LEPs), similar to that used in Massachusetts. Since environmental assessment and remediation is multi-disciplinary, the LEP system recognizes a broader range of professionals than the current Roster system. The LEP system will be managed by an independent board representing both professional and other stakeholder groups. LEPs would oversee a wide range of activities including: site

assessment, risk evaluation, remedial plan design and remediation. They would also prepare the required documentation (similar to the "Record of Site Condition" used in Ontario) so that the regulatory agency could issue a form of comfort letter confirming that "No Further Action" is required for a particular land use. Records of Site Condition will be posted on the existing site registry ("Registry") along with notice of any land use restrictions.

The comfort letter could be called a "No Further Action Letter" as it is in many jurisdictions or it could continue to be called a "Certificate of Compliance". (In this Report we refer to the comfort letter as a No Further Action Letter.) The regulatory agency could delegate the function of acknowledging receipt of Records of Site Condition and issuing No Further Action Letters for limited or no risk sites to LEPs. However, the legislation should expressly limit an LEP's liability regarding the performance of this regulatory function. At least initially, a certain percentage of LEP issued No Further Action Letters for limited risk sites could be audited as part of a fair and transparent auditing process.

A "high risk site" is a site that poses a significant, imminent risk to health, safety or the environment, based on one or more specific factors set out in Figure 1. The factors necessarily require involvement by the Ministry of Water, Land and Air Protection ("Ministry") and Medical Health Officers where there is a potential human health issue. The Minister (or appropriate delegate), acting upon the advice of Ministry staff and as necessary the Medical Health Officer, must designate a site as high risk. Remediation is likely required at high risk sites.[1] The responsible party's LEP would develop a Remedial Action Plan for the high risk site, which then would be approved by the regulatory agency. Once remedial goals are achieved, the LEP would submit a closure report and Record of Site Condition to the regulatory agency which, after reviewing the report, would issue a No Further Action Letter. Throughout the process,

[1] "Remediation" means the development and application of a planned approach that removes, destroys, contains or otherwise reduces the availability of contaminants to the receptors of concern.

the regulatory agency would be available to provide constructive guidance to the parties.

A "no risk site" is a site that poses no risk for a given site use, although it may have substances that exceed the standards. Remediation of these sites would not be required. An LEP would submit a Record of Site Condition stating that the site poses no apparent risk for the intended land use. Receipt of the Record of Site Condition would be acknowledged by posting it in the Registry and a No Further Action Letter would be issued for the site.

A "limited risk site" is a site where contaminants do not present an actual or imminent risk, and regulatory involvement is not required. However, remediation options such as clean up may occur voluntarily and independently for market-driven reasons. At the end of the evaluation or remediation process, the LEP would submit the Record of Site Condition stating that the site poses no apparent risk for the intended land use. Receipt of the Record of Site Condition would be acknowledged by posting it in the Registry and a No Further Action Letter would be issued for the site.

To ensure consistency throughout the Province, all activities necessary to implement the contaminated sites legislation should be centralized in a single office. Functions of the regulatory agency should include:

- Reviewing and developing standards;
- Participating in national programs;
- Overseeing high risk sites;
- Auditing LEP evaluations (until the LEP board is established);
- Providing No Further Action Letters (at least on high site sites); and
- Carrying out necessary enforcement.

Regulatory personnel should also be LEPs, with at least one LEP in each regional office to act as a local liaison for contaminated sites activities.

Throughout the process, professional judgment based on sound science must be accepted. In addition, some level of risk in decision-making is appropriate. The regulatory agency will be available as a resource to provide constructive guidance, in a manner that is sensitive to environmental, social and economic costs and benefits.

An appropriate level of involvement of Medical Health Officers is required since they have a mandate to protect public health. The Panel envisions that their involvement will help expedite determinations of whether a particular site poses a significant risk to human health, as well as provide the public with a greater degree of assurance that public health is protected. We do not intend to insert an additional step in the approval process, but foresee that Medical Health Officers will bring a practical perspective to determinations of whether a site poses risk to human health.

4.3 How Should Standards be Developed and Used?

There are many issues related to standards, including lack of uniformity in how they are derived, and inadequate Ministry resources to assess and modify existing standards or allow modified standards to be applied to completed projects. Accepted procedures for developing standards are not used. As a result many properties throughout the Province are being designated as "contaminated" based on standards that are more stringent than the background levels.

Standards incorporated into the CSR should be only one factor in determining whether a site is "contaminated site" and if remediation is required. Because site conditions vary, it is difficult, if not impossible, to establish in regulation numerical values that are appropriate for all sites. As is recognized by the Canadian Council of Ministers of the Environment ("CCME"), it is more appropriate to use numerical values as policy (criteria or guidelines), rather than embedding them in regulation. Unfortunately, numerical standards have already been entrenched in the current CSR.

If the CSR system of incorporating standards into regulation is maintained, we recommend a change in the way future standards are set. Not only must regulatory standards must be supportable to ensure safe, healthy communities and a sustainable environment; they must also ensure that resources directed toward remediation achieve environmental and health benefits proportionate with their social and economic costs. Standards must be fair to guarantee accountability in remediation costs. The standard setting process, as defined by the 1994 Contaminated Sites Soil Task Group, should be modified so that conditions as defined within the National Academy of Sciences[2] and the CCME[3] are recognized. To accommodate the rapidly developing science related to contaminated sites, the Minister rather than the Lieutenant Governor in Council should be delegated authority under the Act to set and modify the regulatory standards. Finally, all proposed regulatory standards and policy (criteria, guidelines and protocols) should be subject to a consistent, transparent notice and comment process, so that all affected parties may have input. Proposed standards and all policies should be posted on the Internet so they are widely available for review.

In addition, the regulatory agency should have sufficient resources to effectively participate in CCME activities to ensure that proposed national criteria are appropriate for British Columbia. Further, resources must be available to allow the Province to fulfill its obligations regarding consideration of criteria, such as the *Canada Wide Standards* for petroleum hydrocarbons. Regardless, the regulatory agency should not be implementing national criteria as regulatory "standards" where they are inappropriate for British Columbia.

A party who commences the remediation process should be entitled to assess and remediate the property according to the standards of the day. Notification placed in

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[2] National Academy of Sciences, *Water Quality Guidelines, A Report of the Committee on Water Quality Criteria*, Washington D.C., 1972.

[3] Kemper and Associates Inc., *Evaluation of Risk Based Approaches in Environmental Guideline and Standard Setting – Part 1*, Prepared for CCME, 1997.

the Registry at the beginning of the remediation process should crystallize the standards that are applicable both for site assessment and remediation. In addition, decisions regarding site remediation objectives for non-specified toxic substances should also be available on the Ministry website.

It is imperative that the existing CSR standards be modified to ensure that they are based on sound science. Schedule 4 generic standards must be updated on the basis of documented science. Schedule 5 matrix soil standards for protection of aquatic life should be redesignated as "screens" rather than standards. Schedule 6, water quality standards for protection of aquatic life, needs to be modified so that it uniformly reflects Ministry procedures for ecological risk assessments. It is urgent that the Ministry direct resources to make these changes as soon as possible because they continue to cause unnecessary remedial activity or, in some cases, the standard may be inadequate to protect human health or the environment.

4.4 How Can We Ensure that Remediation Is Managed More Responsibly?

Remediation of contaminated sites is difficult in British Columbia because of a lack of disposal facilities for various contaminants and difficulties in obtaining municipal, provincial and federal approvals for various remediation options. As well, the concept of cost-benefit analysis is infrequently used for remediation programs, resulting in extensive resources being applied to limited or no risk sites.

Risk management should be a central part of Ministry policy for addressing contaminated sites. This is consistent with the July 1, 2002 Federal Contaminated Sites Management Policy. Accordingly, the full range of risk management strategies should be accepted and an analysis of social and economic costs and benefits should be an integral component of choosing an appropriate remedial action. We must also reduce liability concerns associated with in-situ risk managed sites.

Finally municipal concerns and the contaminated site impediments to receiving municipal approvals must be addressed in order to expedite remediation and redevelopment of sites.

4.5 Who Will Be Responsible for Remediating Contaminated Sites?

Due to the far-reaching definition of responsible person in the current legislation, every current and former owner, business operator, tenant, producer or transporter involved with the site and all officers, directors and agents of each of those parties is a potentially responsible person. The Panel consultation process confirmed that this overly broad and arbitrary range of responsible persons, combined with the retroactive, absolute, joint and several liability system applying to all sites regardless of risk, have resulted in investors being fearful of investing in or redeveloping land in British Columbia. Accordingly, fundamental change is necessary to shift the focus away from a system driven by fear of liability and make the regulatory tools proportionate with a site's level of risk.

The range of persons considered responsible for remediation of a "contaminated site" should be narrower and tied to a fair and reasonable set of principles for assigning responsibility, rather than the arbitrary and overly broad range of persons currently caught within section 26.5 of the Act and the definitions of "owner" and "operator" in section 26.

Past and present officers, directors, shareholders and employees of companies, as well as lenders, other fiduciaries, transporters and producers, should not be considered responsible persons unless they directly participated in causing the contamination. Responsibility should be limited for those who can demonstrate due diligence.

Responsibility should be connected primarily to a person's control over and causal link to the activity or substance causing the contamination, rather than to considerations of

who has the "deepest pockets" or is the most convenient "victim". In addition, if responsibility is tied to the "polluter pay" and "beneficiary pay" principles, then these principles in their true sense must be upheld. Actual polluters and those who actually benefited from the activity or stand to benefit if the land is remediated should be considered responsible parties.

In many cases, the government of the day sanctioned and even encouraged the activities that ended up causing contamination. Society as a whole also benefited in terms of employment, taxes, cheaper products and increased economic activity. In order to be fair and legally defensible, graduated levels of responsibility should be tied to key dates when legislation or industry practices changed and people became aware of the problems of contaminated sites. This is similar to the system in place in the Netherlands. Where appropriate for high-priority sites, society's share of the remediation costs should be paid for by the fund discussed below.

Where remediation of high-risk sites is not carried out voluntarily and the need for remediation is urgent, the regulatory agency should continue to be allowed to issue remediation orders to the newly defined range of responsible persons. For sites with no risk or limited risk, order powers are unnecessary.

When issuing an order, the regulatory agency necessarily must name one or more responsible persons. However, ultimate determinations of who are responsible persons and their proportionate shares of responsibility should not be made by a manager or any other person within the regulatory agency. These questions are often extremely complex and have wide-ranging implications. They should be made within the context of a fair, legal process. We recommend that they be determined as part of the dispute resolution process discussed below.

4.6 How Will Liability Be Determined and Apportioned?

To ensure that adequate funds are available to remediate high-risk sites, remediation costs should continue to be distributed over a broad range of persons responsible for remediation of the site. However, we recommend that a fair, principled and efficient process be established for allocating and apportioning liability on high risk sites as soon as possible within the remediation process. Allocation should be based on an equitable set of principles defined in the legislation, similar to the approach currently used in Manitoba. For increased certainty, these principles could be expressed in terms of a hierarchy for allocating responsibility for remediation costs. The new process would replace the current cost recovery action and principles of liability.

Parties should first attempt to reach a voluntary agreement, apportioning responsibility for remediation costs amongst themselves. If they fail to reach an agreement, liability should be apportioned through a binding dispute resolution process discussed below.

Apportionment (at least in an interim way) should be made as early as possible in the remediation process, rather than waiting for the full expenditure of remediation costs. Funds would then be available from a variety of parties who are informed of and can participate in remediation from the outset. Each responsible person's share would be fixed as a percentage of the remediation costs or where appropriate capped to a maximum dollar value. Where necessary, interim and final decisions regarding allocation could be made. Mechanisms to provide "security for costs" should also be included.

The Panel recognizes that in the past five years, several cost recovery actions have been filed under section 27 (4) of the current Act. The challenge is to reduce the level of resources diverted away from remediation into litigation and administrative

proceedings, but not create additional unfairness and uncertainty for cases already in the cost recovery system. From a policy perspective, it may be best that all current cost recovery actions be resolved under the new allocation process according to a fairer, more legally defensible set of principles for allocating responsibility. However, the parties could be given an option regarding whether they wish to proceed in the courts under the existing principles or be referred to the new allocation system. A party to an action could request that the court refer the dispute to the new allocation system. The parties then would have an opportunity to make submissions and the court would decide which system is preferable on a case-by-case basis. Ultimately, the Panel feels that more stakeholder consultation is necessary regarding the best way to deal with potential transition issues.

4.7 How Will Disputes Be Resolved?

To reduce conflict and litigation, all disputes relating to contaminated sites should be resolved through alternate dispute resolution. This approach is used for contaminated site disputes in several other jurisdictions we studied. Disputes relating to contaminated sites might include: appeals of remediation orders and designations of high risk sites; disputes over cost apportionment, responsible person status and remediation approach; and possibly civil claims related to contamination. The new process is not intended to interfere with the availability of common law causes of action.

Parties should first be encouraged to resolve a dispute voluntarily. If they are unable to resolve the dispute, any party (including the regulatory agency) may request that the other parties submit to mediation or binding arbitration.

Rather than create a separate government-appointed dispute resolution panel or activate the Allocation Panel, we recommend that mediation and arbitration be carried out using existing mediation and arbitration mechanisms. Arbitration should be

administered by the British Columbia International Commercial Arbitration Centre, under the *Commercial Arbitration Act* and the Arbitration Centre's *Rules of Procedure for Domestic Commercial Arbitrations*. Within the mediation and arbitration processes, an appropriate level of participation by affected neighbours or other parties could be permitted.

Arbitration awards are binding and may be enforced in the same manner as a judgment or order of the court. The parties to the dispute can choose an arbitrator or arbitration panel that has sufficient experience. Arbitration can be tailored to fit the particular dispute and has procedural safeguards already provided for in the *Rules of Procedure*. An arbitration process also contains an appeal mechanism.

Due to the complexity of contaminated site disputes, unless the Environmental Appeal Board process is reformed, appeals of regulatory agency decisions involving contaminated sites should no longer be appealed to the Environmental Appeal Board. They should be resolved through the new alternate dispute resolution process.

4.8 What Mechanisms Provide Closure with respect to Liability?

Liability should be finite and certain. Once remediation goals are achieved, those who carried out or contributed to the costs of remediation should be entitled to an exemption from future liability and remediation orders related to historical contaminants at that site, with certain exceptions. Exceptions could include situations such as those involving deceit or misrepresentation.

To encourage parties to actively participate in or contribute to remediation, all those involved should be named in the comfort letter (whether called a No Further Action Letter or Certificate of Compliance) and benefit from the "liability shield" related to historical contamination.

Future owners, developers, occupants and successors of these parties should also be exempt from further liability for historical contaminants, provided they do not change the land use in a way that requires further remediation, contribute new contamination, or fail to maintain systems related to risk management. A subsequent owner who changes the land use should bear any remediation costs associated with that change.

To bring about closure on liability, section 28.7 of the Act should be replaced with a provision that allows No Further Action Letters to be reopened for the limited exceptions, such as deceit, misrepresentation, emergencies related to the presence of an unrecognized imminent risk, failure to maintain required risk management systems and common law actions related to off-site contamination.

A party who starts the remediation process should be entitled to assess and remediate the property according to the standards of the day. Notification placed in the registry at the beginning of the remediation process should crystallize the standards that are applicable both for site assessment and remediation. Parties should not be evaluating and remediating sites to a moving target based on a possible future change in standards. With sites other than high-risk sites, notification is voluntary since the regulatory agency is not required to oversee the remediation. However, parties remediating limited risk sites have an incentive to notify the registry in order to "crystallize" the standards they intend to use. If standards change in the future requiring further remediation of a site after crystallization, society should pay for the remediation associated with that change in policy if a verifiable imminent risk is present. Safeguards may need to be added to the legislation to ensure that crystallization is used for legitimate purposes.

Parties should also be able to contractually allocate liability for historical contamination. A prospective purchaser exemption should also be established to encourage brownfield redevelopment.

Figure 3 provides an overview of some of the proposed mechanisms to provide closure of liability.

4.9 What Should the Role of the Regulatory Agency Be?

The current contaminated site management system has been described as unnecessarily cumbersome, expensive and bureaucratic and plagued by a lengthy approval process. Significant and substantive changes must be implemented to improve the way contaminated sites are administered in the Province and provide for a timely, responsive and accountable process.

The regulatory agency should be adequately resourced with professional staff, who will focus on high risk sites, standards and guidelines, ongoing regulatory reform, auditing and enforcement. Relative to other jurisdictions in the Pacific Northwest, regulatory resources in British Columbia to manage contaminated sites are sparse.

The Ministry Service Plan calls for a self-funded organization. As a self-funded organization, a new identity is needed to provide the catalyst for a renewed culture and corporate mission, and to focus on service delivery, accountability and performance. Those within the regulatory agency must act in a reasoned, responsive and proportionate manner. Recommendations for establishing a new organizational structure are:

- Establish a separate and unique program, possibly called the BC Land Protection Program, to carry out contaminated site responsibilities;
- Create the position of Executive Director to oversee the Program's activities and report annually to the Minister; and
- Develop a secondment program to encourage the exchange of professionals between industry, consultants and the Program.

The Program's specific functions should focus on planning, monitoring and enforcement. They could encompass:

- Overseeing the identification and remediation of high risk sites;
- Developing standards and guidelines based on science, technology, British Columbia geography and socio-economic factors;
- Creating the initial independent board to oversee a self-governing LEP system;
- Issuing No Further Action Letters;
- Auditing of industry practices and enforcement to ensure high environmental standards;
- Promoting intergovernmental relations and harmonization initiatives;
- Administering information management systems (unless function is out-sourced);
- Providing guidance, direction and information to the public and private sector; and
- Overseeing pollution prevention (P2) initiatives to prevent new contaminated sites.

Originally, the Panel considered the possibility of creating a special operating agency to administer the contaminated sites regime. A special operating agency has three advantages over a Program within the Ministry. First, it allows for more transparent public oversight by an independent board, with representatives of Provincial Government Ministries, municipalities, industry and environmental groups. Second, as the Program is self-funded and self-supported, it is easier to control revenues and expenditures within a special operating agency and may be a more cost-effective way of delivering the required services. Third, a special operating agency may be more effective at establishing a new corporate culture among those regulating contaminated sites and ensure that the new process is timely, responsive and accountable.

However, the Panel is aware that Government is trying to reduce the number of stand-alone entities. The Panel's recommendation, therefore, is to try to incorporate as many of the aspects of a special operating agency into an independent Program within the Ministry.

4.10 How Do We Encourage the Redevelopment of Brownfield Sites?

There is no strategy for redeveloping the many Brownfield sites in British Columbia. Many Brownfield sites are former service stations or bulk petroleum distribution facilities, which are particularly a problem in smaller communities or rural areas where a property's value is generally substantially below the cost of remediation. The current contaminated sites system has even created a problem with high value sites in major centres. The Canadian Petroleum Products Institute has identified 264 Brownfield petroleum product sites in British Columbia, including 55 in the Greater Vancouver Regional District, 23 in Vancouver and 44 on Vancouver Island. Municipalities are also negatively impacted when these and other Brownfield properties that are left undeveloped or are not redeveloped for a higher and better use.

To encourage the remediation and redevelopment of Brownfield sites, we recommend the following:

- Promote the use of risk management as accepted remediation option.
- Create a prospective purchaser exemption to encourage those not currently liable for remedial action to purchase and redevelop Brownfield sites.
- Provide mechanisms for the rebate of property taxes or other economic incentives, where the economic value of the land does not otherwise allow for remediation and redevelopment.
- Establish grants for Brownfield remediation initiatives, particularly in smaller communities.

- Develop a program, similar to those in Alberta and Saskatchewan, to assist with the remediation of service stations.
- Forge a partnership with the petroleum industry and municipalities to allow petroleum sites, including orphan sites, to be remediated and redeveloped expeditiously.

The Panel also supports many of the recommendations of the National Brownfield Redevelopment Strategy and recommends that the Province more actively participate in this initiative.

4.11 What Funding Mechanisms Can Sustain Government's Role in Contaminated Sites?

General revenue funding and the existing Ministry fee structure are inadequate to properly support contaminated site management. This has led to delays in delivering Ministry services. To ensure sufficient resources are applied towards contaminated site management and support Brownfield and other remediation initiatives, a self-sustaining fund and new funding mechanisms are required. Most jurisdictions in North America have funds that are sustained by levies on products that contribute to contamination. The funds allow governments to oversee contaminated site remediation and provide financial assistance for brownfield redevelopment, petroleum storage tank and other industry specific initiatives.

Funding is needed to provide for

- Staff, infrastructure and contract funding to allow Government to oversee high risk sites and carry out the other functions discussed in section 4.9;

- The Brownfield remediation grant initiative and the domestic and commercial underground storage tank remediation initiative; and
- Orphan site / orphan share remediation.

Any new "green" taxes or product levies must clearly link funding sources to generators, contributors and beneficiaries of the contamination and tie the use of funds generated to the active remediation of contaminated sites.

Two sources of funding are suggested:

(i) a wholesale tax or industry-sponsored levy on clear gasoline and clear diesel fuel; and

(ii) underground storage tank registration and licensing fees.

Further discussions with the petroleum industry and Ministry of Finance will be required. Potential future partners for industry-sponsored product levies could include the dry cleaning, wood preservation, pesticide and bulk chemical sectors.

Revenues collected should be put into a segregated trust fund, the management and distribution of which is overseen by an independent board. The board could have representation from Government (Ministry of Water, Land and Air Protection, Medical Health Officers), professional organizations, municipalities, industry and environmental groups.

A final source of funds is fees charged by the regulatory agency for overseeing and reviewing remediation at high risk site remediation and for issuing No Further Action Letters. Fees for regulatory services must be clear, reasonable and proportionate with the services provided. Standard fees relating to the issuance of No Further Action Letters, information searches and site registration could be charged according to a matrix. In addition, market level hourly rates could be charged where a person is

providing professional services, such as reviewing and commenting on proposed remedial plans for high risk sites.

4.12 What Role Will Municipalities Have Under the New System?

Municipalities' actions are often hampered by fear of liability under the current contaminated sites regime. This inhibits property transactions and development. Municipalities are key players in the contaminated sites regime. They need to be encouraged to become active partners in the remediation and redevelopment of sites within their jurisdiction. To reduce fear and enable municipalities to play a more active role, the municipal exemptions need to be strengthened particularly with respect to streets and involuntary ownership of land where they did not cause the contamination. A broader "plume exemption" should also be considered.

Change is needed to expedite rezoning, redevelopment, demolition and other municipal approval processes. No other provincial contaminated sites system ties the issuance of these types of local government approvals to provincial authorities approving a remediation plan or issuing a final comfort letter following remediation. A co-operative municipal / provincial procedure is required to enable rezoning and redevelopment processes to proceed concurrently with assessment and remediation at a site. For example, municipal processes could proceed, with the final occupancy permit or inspection being contingent upon receiving a No Further Action Letter or having a Record of Site Condition posted in the Registry confirming that the site is suitable for a particular land use. At the very least, provincial reviews should have flexibility, particularly if a majority of the site will be excavated. The Roster or the future LEP review process should also negate the need for provincial reviews providing that there is evidence that the site is not a high risk.

The requirement for owners of contaminated sites to notify adjacent landowners should be extended to owners of utility corridors and rights-of-way that may be impacted. In addition, other economic incentives must also be employed in those

situations with rural areas where a municipality itself has become the reluctant owner of a contaminated site. Finally, the issue of soil relocation should be resolved to expedite the remediation process.

4.13 What Initiatives Can Help Resolve Existing and Prevent Future Contamination?

A vast majority of sites affected by the current legislation involve historical contamination. Despite the efforts of many industry sectors to develop chemical management programs, other industry sectors may not have such programs. Hence additional contaminated sites in British Columbia may be created. To prevent future contaminated sites, there should be a broader use of P2 Planning and emphasis on "continual improvement" at operational facilities, which was recommended on July 16, 2001 by the British Columbia Pollution Prevention Planning Implementation Advisory Committee.

In line with the more cooperative culture proposed, working partnerships may evolve between key industry groups – such as petroleum industry, dry cleaners, wood preservers, home heating fuel wholesalers -- and the Program. It is not the Panel's intention to be prescriptive as to how these partnerships might work.

However, the Panel suggests by way of example, a partnership between the Program, petroleum industry and municipalities to facilitate remediation of petroleum storage tank sites and redevelopment of brownfield sites. Over 60% of the contaminated sites in British Columbia are associated with leaking petroleum storage tanks. Apart from provisions in the *British Columbia Fire Code*, the Province lacks a regulatory framework or strategy for identifying, registering, managing, decommissioning and remediating commercial and household underground storage tanks. The partnership for example might develop:

(i) protocols for the efficient remediation of petroleum storage tank sites;

(ii) protocols regarding soil removal;

(iii) funding mechanisms based on petroleum levies for brownfield redevelopment;

(iv) a process for communicating and resolving problems that arise in one context so that they do not reoccur elsewhere; and

(v) a comprehensive regulatory framework for identifying, registering, managing, decommissioning and remediating commercial and household underground storage tanks.

Only certain sectors have industry-led initiatives to ensure proper chemical and product management. Other sectors should also identify ways to improve their chemical and product management. Users of bulk quantities of chemicals could also be subject to common design, operation and inspection requirements, similar to those being implemented at wood preservation facilities throughout Canada. There could be penalties for failing to implement environmental management plans.

5. WHAT CHANGES SHOULD BE IMPLEMENTED IMMEDIATELY?

Many on-going site assessments and remediation programs now underway continue to be effected by deficiencies in the current system. The Panel recommends that the Ministry immediately address the following deficiencies related to policy, practice, organizational structure, staff and funding levels.

5.1 Greater Acceptance of Risk Management

There should be recognition that various risk management techniques can protect human health and the environment to the same extent as comprehensive clean up. Greater use of a wider range of risk management techniques will not occur unless the

stigma and lack of acceptance associated with "Conditional Certificates of Compliance" is eliminated. Immediate legislative changes are required to allow a single form of comfort letter – a "Certificates of Compliance" – to be issued regardless of remedial technique. Certificates of Compliance, with conditions regarding on-going monitoring and management must replace Conditional Certificates of Compliance.

5.2 Greater Acceptance of Site Specific Standards and Risk Assessment

The message must be clear that "site specific standards" and "risk assessments" are as acceptable as Schedule 4, 5 and 6 standards.

5.3 Applicable Standard

For current remedial activity that has been affected by changing standards – for example, the recent Stage II amendments – the standard in effect when assessment and remediation began should be used unless the new standard is less stringent.

5.4 Acceptance of Professional Judgment

Throughout the system there should be a greater acceptance of professional judgment and common sense. The current system seems to mandate adherence to Ministry policy or protocols, regardless of whether they make sense in a particular situation. Professional judgment regarding what is appropriate at a particular site should be given more weight.

5.5 Roster System

A key problem in contaminated sites administration and management is a lack of staff and resources. There are not enough Roster members and they are centred primarily in the Lower Mainland. There are several reasons for this.

First, the Roster candidates are limited to those registered by APEG and the BCIA, and other professionals who play a major role in site investigation are excluded. There must be a means to overcome this barrier.

Second, the certification process has been described as unfair, particularly with respect to the examination process. A high failure rate occurs even by individuals who are well-trained and who have many years of experience. An external review examination process has defined several faults, including subjective marking of written answers and it is recommended that those faults be rectified immediately. The exam should (i) focus on key principles for site assessment and remediation; (ii) recognize that the procedures of the Ministry are guidance rather than law; and (iii) not be biased toward a specific sector of site assessment and remediation.

Third, the audit process of Roster member decisions is extremely rigorous and prescriptive, even for low risk sites. There is no latitude for the Roster member to exercise professional judgment. Removal from the Roster can have severe professional business repercussions to an individual. From a total of six audits, two members have been removed from the Roster.

Until the proposed LEP program is implemented, the certification and testing procedures must be changed to encourage more qualified professionals to step forward and become Roster members and to provide for a fair certification process that addresses the concerns expressed above. In addition, conflict of interest issues must be clarified in the existing system.

Following the resolution of the Panel's concerns expressed above, the Panel recommends that Roster members be allowed to review "no risk" and "limited risk" sites as defined in this document, until the LEP process is established. Since Roster members have years of professional experience relating to contaminated sites, the Panel sees no reason why Roster members should not be reviewing everything but high risks sites. This will allow for a more timely review of new applications under the

current process as well as allowing for existing applications in Ministry offices to be reviewed by Roster Members. It should also be made clear that Roster members can use professional judgment within their reviews and reaffirm the range of projects they can review, including projects supported by data based on statistical analysis.

5.6 Distinction between Legal Requirements and Policy

There is great confusion as to whether Ministry staff can insist that policy documents (in the form of guidelines, criteria, protocols, draft standards etc.) be followed within the contaminated sites system. The Panel heard numerous comments from stakeholders, who were required to assess and remediate sites based on draft "standards" and "criteria" or carry out work because of Ministry "protocols" that were neither incorporated into the CSR nor approved as Ministry policy by senior Ministry officials. Ministry staff should recognize that there is important distinction between legal requirements, that are incorporated into the Act or into the CSR as "standards", and all other documents which are meant to be guidelines and policy. Requirements not found in the Act or CSR are provided to give support, context and direction to professional judgment. They do not have the force of law and cannot be insisted upon universally. It must be clarified to Ministry staff and to the public that draft standards or guidelines are not obligatory in the remediation process.

5.7 Ministry Resources

The separate and unique BC Land Protection Program can be established without legislative change to foster a new approach to contaminated sites. In addition, the Ministry should withdraw existing guidelines and protocols that increase the time and costs of the current process in a manner disproportionate to the benefits and protection they provide. In addition, Ministry staff should recognize and encourage more flexibility in private sector professional judgment and refrain from developing protocols unless they are necessary to expedite the current process.

5.8 Industry Initiatives

Discussions with the petrochemical industry through the Canadian Petroleum Products Institute should be initiated to plan for a province-wide underground storage tank partnership. In addition, the private sector should be encouraged to bring forward initiatives to help streamline the existing process over the transition period.

In addition, a resolution must be found to address the unnecessary duplication and lack of consistency between the closure and reclamation requirements under the *Mines Act* and *Safety, Health and Reclamation Code for Mines in British Columbia* and the contaminated sites requirements under the Act and CSR that were not resolved by May 9, 2002 amendments.

5.9 Brownfield Sites

Discussions with the Union of British Columbia Municipalities and the Ministry of Community, Aboriginal and Women's Services should be initiated to plan for a province-wide Brownfields partnership and to actively participate in the current Federal brownfield initiative.

5.10 Federal Liaison

The Province's relationship with the Federal Government, particularly with Environment Canada and Fisheries and Oceans Canada, needs to be redefined. Presently, the relationship is poorly delineated and the role of each party is neither unique nor are the boundaries of responsibility and accountability clear. To rectify this problem, discussions must begin immediately at the Assistant Deputy Minister and Director-General level to clarify the roles and responsibilities of each agency relating to contaminated sites. Specifically, agreement should be sought for a clear Provincial

lead in administering and managing contaminated sites in British Columbia with federal involvement only as requested or as necessary.

5.11 Greater Recognition of Cost Benefit Analysis

In accordance with CCME guidelines and the July 1, 2002 Federal Contaminated Sites Management Policy, more analysis is required on cost and benefits during the process for selecting an appropriate remedial action.

As an example, the Panel was made aware of a site being remediated near Rock Bay, Victoria that may cost between $ 30 and $50 million. Studies have shown that the site does not presently pose a health risk and is acceptable for many land uses. In addition, the environmental impact on the Bay, if there is any impact at all, is minimal compare to the impact of the existing storm water outfalls that every day put additional contaminants to the Bay. As the planned remediation would be financed by two public agencies, a great deal of public money would be directed away other uses such as education and health care for a remediation which will achieve little if any benefit to human health or the environment. The risk posed by the existing property to workers and the immediate environment is negligible compared with the risks that would be created by construction activities carried out during the remediation program. The parties are only planning to remediate the site due to fears of potential liability under the current contaminated sites regime.

This situation demonstrates the need to move away from a liability driven regime to a regime that focuses on achieving tangible benefits to health, safety and the environment.